

CLAIMS

1. Plywood, comprising at least two wood veneer layers and at least one adhesive layer, whereby the adhesive layer comprises a resin composition comprising a triazine compound (T), formaldehyde (F) and optionally urea, characterized in that the molar  $F/(NH_2)_2$  ratio of the adhesive layer lies between 0.70 and 1.10 and the molar F/T ratio of the adhesive layer lies between 1.0 and 3.5.
2. Plywood according to claim 1, wherein the triazine compound is melamine (M) and the molar F/M ratio of the adhesive layer lies between 1.0 and 3.5.
3. Plywood according to claim 2, wherein the molar  $F/(NH_2)_2$  ratio of the resin composition lies between 0.70 and 1.10 and the molar F/M ratio of the resin composition lies between 1.0 and 3.5.
4. Plywood according to claim 2, wherein the molar  $F/(NH_2)_2$  ratio of the adhesive layer lies between 0.80 and 1.05 and the molar F/M ratio of the adhesive layer lies between 1.0 and 3.5.
5. Plywood according to claim 4, wherein the molar  $F/(NH_2)_2$  ratio of the resin composition lies between 0.80 and 1.05 and the molar F/M ratio of the resin composition lies between 1.0 and 3.5.
6. Plywood according to any one of claims 2 - 5, wherein at least 60 wt% of the melamine in the adhesive layer and at least 40 wt% of the urea in the adhesive layer originates from addition during preparation of the resin composition.
7. Plywood according to any one of claims 1 - 6, wherein the solids content of the adhesive layer prior to curing is at least 50 wt.%.
8. Plywood according to claim 1, wherein the amount of urea in the adhesive layer lies between 0 and 25 g/m<sup>2</sup> per adhesive layer.
9. Plywood according to claim 8, wherein the adhesive layer contains essentially no phenolic resin and wherein the adhesive layer contains essentially no pMDI resin.
10. Plywood according to any one of claims 1 - 9, having an average F-emission according to JAS 987 2000 which is at most 0.5 mg/l.
11. Plywood according to claim 10, having an average F-emission according to JAS 987 2000 which is at most 0.3 mg/l.
12. Plywood according to claim 10 or 11, wherein the plywood has a shear

strength according to JAS 987 2000 of at least 4 kg/cm<sup>2</sup>.

13. Plywood according to any one of claims 1 – 12, wherein at least one wood layer contains yellow or red meranti.

14. Process for the preparation of plywood, comprising the steps of:

- 5 a) preparing a resin composition comprising melamine (M), formaldehyde (F) and optionally urea;
- b) preparing an adhesive composition, comprising the resin composition and optionally other compounds, whereby the molar  $F/(NH_2)_2$  ratio of the adhesive layer lies between 0.70 and 1.10 and the molar F/M ratio of the
- 10 adhesive layer lies between 1.0 and 3.5;
- c) applying the adhesive composition to at least one side of a wood layer, whereby at least one adhesive layer is formed;
- d) bringing the at least one adhesive layer into contact with a second wood layer so that a plywood is formed;
- 15 e) curing the plywood.

15. Process according to claim 14, wherein the adhesive composition is applied in step c) in an amount lying between 75 and 250 g/m<sup>2</sup> per adhesive layer.

16. Plywood, comprising at least two wood veneer layers and at least one adhesive layer, whereby the adhesive layer comprises a resin composition

20 comprising a triazine compound (T), formaldehyde (F) and optionally urea, characterised in that the amount of urea in the adhesive layer lies between 0 and 25 g/m<sup>2</sup> per adhesive layer and in that the plywood has a shear strength according to JAS 987 2000 of at least 4 kg/cm<sup>2</sup>.

17. Plywood according to claim 14, wherein the triazine compound consists

25 essentially of melamine.